(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 27 October 2005 (27.10.2005)

PCT

English

(10) International Publication Number WO 2005/101309 A1

(51) International Patent Classification⁷: G06T 5/00

(21) International Application Number:

PCT/CA2004/002198

(22) International Filing Date:

24 December 2004 (24.12.2004)

(25) Filing Language:

(26) Publication Language: English

(30) Priority Data: 60/562,240

15 April 2004 (15.04.2004) US

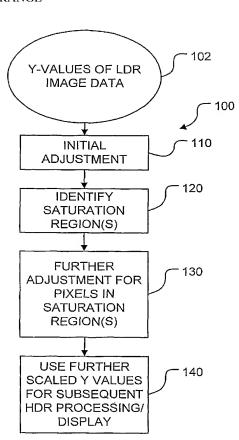
- (71) Applicant (for all designated States except US): THE UNIVERSITY OF BRITISH COLUMBIA [CA/CA]; Industry Liaison Office, 103 6190 Agronomy Road, Vancouver, British Columbia V6T 1Z3 (CA).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WHITEHEAD,

Lorne, A. [CA/CA]; 3015 West 12th Avenue, Vancouver, British Columbia V6K 2R4 (CA). SEETZEN, Helge [DE/CA]; 5432 Duquette Street, Montreal, Québec H4A 1J6 (CA). WARD, Gregory, John [US/US]; 1200 Dartmouth Street, Albany, California 94706 (US).

- (74) Agents: RATTRAY, Todd, A. et al.; OYEN WIGGS GREEN & MUTALA, 480 The Station, 601 West Cordova Street, Vancouver, British Columbia V6B 1G1 (CA).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: METHODS AND SYSTEMS FOR CONVERTING IMAGES FROM LOW DYNAMIC RANGE TO HIGH DYNAMIC RANGE



(57) Abstract: Aspects of the invention provide systems and methods for converting a digital image represented in a lower bit depth representation to a higher bit depth representation. A saturation region is identified, where a color model value of the pixels in the saturation region is above an upper saturation threshold or below a lower saturation threshold. The color model value for each pixel in the saturation region is then adjusted by a corresponding adjustment. The magnitude of the adjustment for each pixel is based on characteristics of the image data

WO 2005/101309 A1

WO 2005/101309 A1



(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

with international search report